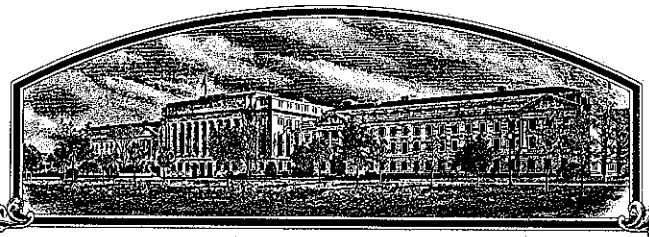

No. 9100198

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

AgriPro Biosciences Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT TY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Longhorn'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington, D.C. *this* 30th *day of* April *in the year of our Lord one thousand nine hundred and* ninety-three.

Attest:

Kenneth B. Evans

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Mike Espy

Secretary of Agriculture

APPROVAL EXPIRES 4-30-85

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1. NAME OF APPLICANT(S) ~~AgriPro Biosciences Inc.~~ HybriTech US, a Monsanto Company

2. TEMPORARY DESIGNATION WI88-024 CGM 01 Jun 1998

3. VARIETY NAME Longhorn

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*
6700 Antioch
Shawnee Mission, Kansas 66204

5. PHONE *(Include area code)*
913-384-4940 (KS)
303-532-3721 (CO)

FOR OFFICIAL USE ONLY

PVPO NUMBER 9100198

6. GENUS AND SPECIES NAME Triticum aestivum

7. FAMILY NAME *(Botanical)* Gramineae

FILING: DATE June 17, 1991 TIME ☐ A.M. ☐ P.M.

8. KIND NAME Hard Red Winter Wheat

9. DATE OF DETERMINATION 1) ~~1988~~ July 1989 2) 1990 AAA per letter 9 Mar 1993

FEES RECEIVED: AMOUNT FOR FILING $ 2150.00 DATE June 11, 1991

AMOUNT FOR CERTIFICATE $250.00 DATE Apr. 6, 1993

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

12. DATE OF INCORPORATION
February 10, 1989

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

~~R.E. Heiner~~
~~6700 Antioch~~
~~Shawnee Mission, KS 66204~~
~~913-384-4940~~

Mark J. Messmer
HybriTech US OR
5912 North Meridian
Wichita, KS 67204

~~C. Bruns or R.F. Bruns~~
~~P.O. Box 30~~
~~Berthoud, CO 80513~~

PHONE *(Include area code)*: ~~303-532-3721~~ 316-755-7707
Fax: 316-755-0072
Email: Mark.J.Messmer@Monsanto.Com

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. [X] Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)* CGM 01 Jun 1998
b. [X] Exhibit B, Novelty Statement.
c. [X] Exhibit C, Objective Description of Variety *(Request form from Plant Variety Protection Office.)*
d. [X] Exhibit D, Additional Description of Variety.
e. [X] Exhibit E. Statement of the Basis of Applicant's Ownership. Exhibit F. Quality & Agronomic Data

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act.)* [X] Yes *(If "Yes," answer items 16 and 17 below)* ☐ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
[X] Yes ☐ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[X] Foundation [X] Registered [X] Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ Yes *(If "Yes," give date)*
[X] No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES ?
☐ Yes *(If "Yes," give names of countries and dates)*
[X] No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT Robert E Heiner DATE May 29, 1991

SIGNATURE OF APPLICANT DATE

FORM WA-470 (7-84) (Edition of 3-84 is obsolete.)

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EXHIBIT A.

ORIGIN AND BREEDING HISTORY OF LONGHORN

Longhorn originated from the cross NS2630-1/Thunderbird made in 1983. Longhorn was observed regionally as an F4 plant row in 1986. Longhorn was tested in preliminary yield trials in 1987 and designated experimental number WI88-024. Longhorn has been tested in AgriPro replicated trials representing a fairly broad area of the Hard Red Winter Wheat region from 1988 thru 1990. Longhorn is entered in selected official 1991 university trials and the 1991 Southern Regional Preformance Nursery.

In 1989, head-rows were grown in Berthoud, Colorado. Progeny of these head-rows were selected for harvest in a .5 acre progeny breeder seed increase in 1990, which produced 900 pounds of breeder seed.

Longhorn is uniform and stable. Less than 0.5% of the plants were rogued from the breeder seed field in 1990. Approximately 90% of these rogued variant plants were five to twelve centimeters taller than Longhorn. There were also .01% awned wheat plants discarded from this breeder seed field. Up to 1% total variant plants may be encountered in subsequent generations.

EXHIBIT B.

NOVELTY STATEMENT

Longhorn is most similar to the hard red winter wheat Thunderbird. However, it can be distinguished by the following morphological characteristics:

- Longhorn is an awnletted hard red winter wheat. Thunderbird is an awned hard red winter wheat.
- Longhorn is blue-green at boot stage. Thunderbird is green at boot stage.
- Longhorn has an obtuse beak on the glume. Thunderbird has an acute beak on its glume.
- Longhorn has a round to square shoulder shape on the glume. Thunderbird has an oblique shoulder shape.

FORM APPROVED: OMB NO. 0581-0065

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT (*TRITICUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
AgriPro Biosciences Inc.

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
6700 Antioch
Shawnee Mission, KS 66204

FOR OFFICIAL USE ONLY
PVPO NUMBER 9100198
VARIETY NAME OR TEMPORARY DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:

[1] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

[2] 1 = SPRING 2 = WINTER 3 = OTHER (*Specify*) _____ [2] 1 = SOFT 2 = HARD 3 = OTHER (*Specify*) _____

[2] 1 = WHITE 2 = RED 3 = OTHER (*Specify*) _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

[2][3][4] FIRST FLOWERING [2][4][0] LAST FLOWERING

4. MATURITY (*50% Flowering*): *Equal to Thunderbird

[---] NO. OF DAYS *EARLIER* THAN ..... [---] 1 = ARTHUR 2 = SCOUT 3 = CHRIS

[---] NO. OF DAYS *LATER* THAN ..... [--] 4 = LEMHI 5 = NUGAINES 6 = LEEDS

5. PLANT HEIGHT (*From soil level to top of head*):

[0][9][6] CM. HIGH

[---] CM. TALLER THAN ..... [--]

[0][3] CM. SHORTER THAN ..... [7] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7) Thunderbird

6. PLANT COLOR AT BOOTING (*See reverse*):

[3] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:

[1] 1 = YELLOW 2 = PURPLE

8. STEM:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[2] Waxy bloom: 1 = ABSENT 2 = PRESENT

[2] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

[1] Internodes: 1 = HOLLOW 2 = SOLID

[0][5] NO. OF NODES (*Originating from node above ground*)

[2][2] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

[2] Anthocyanin: 1 = ABSENT 2 = PRESENT

[2] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

[1] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (*Specify*): _____

[2] Flag leaf: 1 = NOT TWISTED 2 = TWISTED

[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

[2] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

[1][2] MM. LEAF WIDTH (*First leaf below flag leaf*)

[2][5] CM. LEAF LENGTH (*First leaf below flag leaf*):

FORM LPGS-470-6 (7-81) (Edition of 3-79 may be used)

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FORM GR-470-5 (REVERSE)

11. HEAD:

[3] Density: 1 = LAX 2 = DENSE 3=middense

[1] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) _____

[3] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[1] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

[0][9] CM. LENGTH [9.][5] MM. WIDTH

12. GLUMES AT MATURITY:

[1] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

[2] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

[4-3] Shoulder shape: Square to rounded 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[1] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[1] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[2] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[2] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[1-3] Shape: ovate to elliptical 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[2] Brush: 1 = SHORT 2 = midlong 3 = LONG

[1] Brush: 1 = NOT COLLARED 2 = COLLARED

[---] Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[3] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

[6.][2] MM. LENGTH [3.][1] MM. WIDTH [3][5] GM. PER 1000 SEEDS

17. SEED CREASE:

[1] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[1] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3=Moderately Susceptible 4=Moderately Resistant

[4] STEM RUST (Races) field races [4] LEAF RUST (Races) field races [0] STRIPE RUST (Races) _____ [0] LOOSE SMUT

[3] POWDERY MILDEW [0] BUNT [0] OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3=Moderately Susceptible 4=Moderately Resistant

[0] SAWFLY [0] APHID (Bydv.) [0] GREEN BUG [0] CEREAL LEAF BEETLE

[0] OTHER (Specify) _____ HESSIAN FLY RACES: [1] GP [0] A [0] B [0] C [0] D [0] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Thunderbird	Seed size	Sierra
Leaf size	Thunderbird	Seed shape	Sierra
Leaf color	HR 53	Coleoptile elongation	Thunderbird
Leaf carriage	Thunderbird	Seedling pigmentation	Thunderbird

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.T. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States. Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

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EXHIBIT D.

ADDITIONAL BOTANICAL DESCRIPTION OF LONGHORN

Longhorn is a hard red winter wheat bred and developed by AgriPro Biosciences Inc. This variety is a high yielding, medium height semidwarf with long coleoptiles, midseason maturity, strong-straw and fair winterhardiness. Longhorn provides good resistance to the current predominant field races of leaf and stem rust. Longhorn has been identified as having good test weight patterns and excellent milling and baking properties.

Juvenile growth is semi-erect. Plant color is blue green at boot stage with an erect, twisted flag leaf. Auricle hairs and anthocyanin are present. Waxey bloom is present on the flag leaf sheath, head and stem. Head shape is tapering, middense, awnletted and white at maturity. Glumes are short in length and of medium width with rounded to square shoulder shapes and obtuse beaks. Seed shape is ovate (some slightly elliptical) with rounded cheeks and midlong to long brush hairs. Seed crease is narrow and depth is shallow.

Longhorn is broadly adapted to a large portion of the HRWW region. It appears to be best adapted to the HRWW growing regions of Kansas, southern Nebraska, Oklahoma and Texas.

EXHIBIT E.

STATEMENT OF THE BASIS OF APPLICANTS OWNERSHIP

AgriPro Biosciences Inc. is the applicant for protection in this case being:

a) The incorporated business (registered in Delaware) for and within which regular employees have bred the named variety.

b) The proprietory owner and intending commercial user of the variety.

EXHIBIT F.

QUALITY AND AGRONOMIC DATA

AGRIPRO WHEAT
HARD RED WINTER WHEAT

YEAR: 1990

YEAR	VARIETY OR LINE	LOC	FLOUR/WHEAT QUALITY						MIXOGRAM			BAKING QUALITY			CRUMB			OVER ALL	CMT
			WHT PROT	FLR PROT	HRD	NHRD	FLR YLD	ASH	PK TIME	PK HT	TOL	ABS	MIX TIME	LOAF VOL	GR	TX	COL		
			14%mb	14%mb R			% R		min	N.U.	mm R	% R	min R	cc R	R	R	R	R	
90	WI88-024	NO	13.4	12.1 4	63	86	72.0 1	.444	4.50	4.8	1502 4	63.0 3	4.50 3	970 6	4	3	2	43	
90	WI88-024	CI	13.3	11.3 6	63	89	70.8 1	.565	4.00	4.8	1000 5	62.0 5	4.00 1	910 7	3	2	2	46	
89	WI88-024	GI	13.3	11.7 4	71	60	70.8 1	.000	4.00	5.0	1370 5	61.0 3	4.00 1	950 6	3	3	2	41	
89	WI88-024	NO	13.8	12.8 3	67	73	66.8 1	.000	3.00	5.5	830 4	64.0 4	3.00 3	1070 5	4	3	2	39	
88	WI88-024	SK	13.7	12.8 7	56	99	64.4 2	.000	4.00	4.2	1527 3	61.0 5	4.00 1	1100 4	4	4	3	48	
	AVERAGE		13.5	12.1 5	64	81	69.0 1	.505	3.90	4.9	1246 4	62.2 4	3.90 2	1000 6	4	3	2	43	
90	HAWK	NO	12.5	11.6 6	63	95	69.4 3	.496	4.50	4.8	1736 3	62.0 4	4.50 3	920 7	4	3	2	49	
90	HAWK	CI	13.5	12.4 4	65	86	66.2 5	.585	4.25	5.0	1488 2	64.0 3	4.25 1	1000 4	4	3	2	39	
89	HAWK	GI	12.4	11.1 6	66	74	67.8 3	.000	4.00	5.0	1507 3	60.0 4	4.00 1	900 6	3	3	2	44	
89	HAWK	NO	12.6	11.7 6	65	78	70.1 2	.000	3.25	5.3	1437 4	62.0 5	3.25 1	1000 6	3	2	2	50	
88	HAWK	SK	13.7	12.8 7	60	93	61.0 4	.000	5.50	4.7	1754 1	61.0 5	5.50 7	1110 3	5	4	3	53	R
	AVERAGE		12.9	11.9 6	64	85	66.9 3	.541	4.30	5.0	1584 3	61.8 4	4.30 3	986 5	4	3	2	47	

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page 1.

AGRIPRO HARD RED WINTER WHEAT TRIAL SUMMARY

VAR./ LINE	YIELD (BU/A) 1988 (2)	1989 (4)	1990 (8)	3-YR. AVG (14)	T.WT. (LB/BU)	HD	ANTH	MT	COLEO	HT	STRAW STRENGTH	LEAF RUST S	LEAF RUST R	STEM RUST S	STEM RUST R	PM	HF	WSMV	SBMV	SSMV
WI88-024	78.0	79.1	62.3	73.1	62.4	5	6	5	3	4.5	3	2	5	3	4	5	8	5	7	7
WI88-083	81.5	85.1	73.0	79.9	61.2	4	5	3	5	4	4	2	3	5	4	2	8	7	4	3
HAWK	77.4	88.1	58.4	75.3	60.6	5	6	6	4	5	5	8	8	4	4	6	8	6	3	2
THUND.BD	76.0	78.6	67.6	74.1	62.2	5	6	5	2	5	3	3	6	5	4	7	6	5	3	6
VICTORY	74.8	88.6	72.5	77.7	61.2	5	5	3	5	4	4	2	3	7	5	5	9	7	3	2
ABILENE	74.7	83.2	67.5	75.1	62.4	6	7	6	5	3	2	3	7	6	5	8	8	6	3	4

Data generated in 1988:

Berthoud, CO - Yield, Test Wt., Height, Lodging severity (straw strength), Maturity, Pollination, Hessian Fly (greenhouse screening), Powdery Mildew, Leaf Rust, Stem Rust (greenhouse screening)

Salina, KS - Yield, Test Wt.

Everest, KS - Soil Borne Mosaic Virus

Data generated in 1989:

Berthoud, CO - Yield, Test Wt., Height, Heading Date, Stem Rust (grnhse. & field), Leaf Rust (grnhse)

Nardin, OK - Yield, Test Wt., Height, Maturity, Lodging severity (straw strength), Leaf Rust (field)

Garden City, KS - Yield, Test Wt.

Geneva, NE - Yield, Test Wt., Height

Data generated in 1990:

Berthoud, CO - Yield, Test Wt., Height, Powdery Mildew, Coleoptile (grnhse), Leaf Rust (grnhse), Stem Rust (field & grnhse)

Nardin, OK - Yield, Test Wt., Maturity, Height, Leaf Rust

Wichita, KS - Yield, Powdery Mildew

Salina, KS - Yield, Leaf Rust

Everest, KS - Yield, SSMV

Geneva, NB - Yield, Leaf Rust

Grant, NE - Yield, Test Wt., Lodging severity (straw strength), SBMV

Burlington, CO - Yield, Test Wt.,Lodging severity

Hays, KS - WSMV (visual screening, Dr. T.J. Martin, KSU)

*The rankings in the table above are based on a scale of 1-9, where 1 and 9 represent the following extremes for the respective traits.

	1	9
Test Weight	high	low
Heading	early	late
Anthesis	early	late
Maturity	early	late
Coleoptile	long	short
Height	short	tall
Straw strength	strong	weak
All disease & insect ratings	resistant	susceptible

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